



(WO/2002/014322) PORPHYRIN COMPOUNDS CONSISTING OF PORPHYRIN RINGS FUSED IN A SINGLE DIRECTION BY THREE BONDS, I.E., ONE MESO-MESO CARBON BOND AND TWO \$g(b)-\$g(b) CARBON BONDS AND PROCESS FOR THEIR SYNTHESIS

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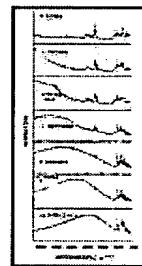
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Abstract: A porphyrin ring-fusion polymer which consists of two or more Zn²⁺-porphyrin rings fused in a single direction and in which any two porphyrin rings adjacent to each other are fused by three covalent bonds, that is, one meso-meso carbon bond (i.e., one bond between meso-position carbon atoms) and two \$g(b)-\$g(b) carbon bonds (i.e., two bonds between \$g(b)-position carbon atoms adjacent to the meso-position carbon atoms); a process for preparing the porphyrin ring-fusion polymer regioselectively by conducting the fusion reaction in an aromatic hydrocarbon solvent in the presence of a quinone and a Lewis acid containing a rare earth element under reflux; and fused-ring porphyrin compounds obtained by subjecting the porphyrin ring-fusion polymer to demetallization or replacement of the Zn atoms by other metal atoms.



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